

## CHAPTER 13. OCEANIC OPERATIONS TO THE FORMER SOVIET UNION AND OTHER SOVIET BLOC NATIONS

1. **INTRODUCTION.** The geopolitical area formerly known as the Soviet Union is now comprised of numerous independent states (IS). This section of the world is undergoing rapid and often unanticipated changes in the field of international and domestic aviation. As updated information becomes available, it will be included in future revisions of this advisory circular (AC).

2. **GENERAL.** As a result of the new bilateral air transportation agreement between the United States and some of the IS, a significant increase in air transportation between the two countries is expected. Operators of both large and small aircraft will be increasing scheduled and chartered air service. Due to the short distance between the state of Alaska and Russia, significant increases in air traffic are expected in the far eastern portion of this region. This area has traditionally been called the Soviet Far East (SFE).

*a. Overview of Regional Differences in the IS.* The area comprising the IS is more than twice the size of the United States and is significantly more diverse in terms of aviation infrastructure. Flight operations within the western part of the country (generally west of the Ural mountains) are considerably less challenging than flights within the eastern part of the area. In the east, primarily due to limited facilities, sparse population, and harsh winter weather, routine flight planning can be quite challenging. Communications, navigation, and airport availability require special emphasis when planning flights within this region. Although operating aircraft in the western IS is generally less demanding, many significant operational differences exist. The airports and airways in the IS are divided into two categories: international and domestic.

*b. International Airports and Airways.* International routes and airports in the IS are generally available for use by foreign aircraft operators, provided the operators have received appropriate flight authorizations. These routes and airports are published in the appropriate Aeronautical Information Publication (AIP). Many of the newly formed countries are currently publishing AIP's and these should be obtained prior to operating in or over any country that was formerly part of the Soviet Bloc. Air traffic control (ATC) communications are provided in English, and airports have customs and immigration services as well as fuel (AVGAS availability is limited). Instrument approach procedures (IAP) are generally available in the International Civil Aviation Organization (ICAO) format and are similar to approach procedures used worldwide.

*c. Domestic Airports and Airways.* Domestic airports and routes in the IS are generally not usable by foreign aircraft operators unless a local navigator is used to communicate with ATC and to provide instructions to the flightcrew regarding navigation principles and procedures. En route and terminal ATC within the domestic systems are accomplished using Russian, since a large percentage of IS air traffic controllers do not speak English. En route charts and IAP's for the domestic system are not published in English, are generally not available to foreign aircraft operators, and may not meet ICAO requirements. Weather and Notice to Airmen (NOTAM) information is difficult or impossible to obtain, and is not provided in English or in standard format.

*d. General Navigational Considerations.* Navigation off established airways in the IS is generally not permitted. Foreign aircraft operations are restricted to published international routes and airports, even for refueling stops and alternate airports. Appropriate flight crewmember training on metric conversion and the in-flight availability of conversion charts are necessary to enable crewmembers to convert metric altitudes, weights, and windspeeds. Although operators are technically permitted to conduct flights to or within the IS under visual flight rules (VFR), there are significant IS flight rules differences that normally preclude foreign aircraft operators from conducting flights under VFR. In some areas, ATC procedures have been developed to allow operations off published routings using radar vectors. If clearance is received to operate off airways, the carrier is authorized to accept the clearance. However, due to military concerns, it is possible that the radar vectors received may not be the most expeditious for the carrier.

e. **AIP.** The U.S.S.R. AIP is the primary document available (at the time of publication of this advisory circular) concerning foreign aircraft operations within most of the IS, but this is rapidly changing and many states are now or will soon be publishing their own AIP's. Because of the rapid change, operators should exercise extreme care in determining the status of the AIP to be used. The U.S.S.R. AIP is published by the Aeronautical Information Service (AIS), which is part of the Ministry of Civil Aviation (MCA) of Russia. It is published in both Russian and English and contains detailed flight operational requirements as well as terminal, airport, and instrument approach charts in ICAO format. It is available from the AIS on an annual subscription basis, including monthly revisions. The navigation charts and standard instrument approach procedures (SIAP) for Russia and other IS's domestic systems are not included in the AIP and are usually not available in English. Further information may be obtained from the following:

The Russian Embassy  
1125 16th Street, N.W.  
Washington, DC 20035  
Telephone (202) 628-7751

f. **ATC Communications.** The ATC communication system within the IS is generally good. Very high frequency (VHF) is commonly used for en route communications, but high frequency (HF) is required for certain routes. Communication equipment requirements are listed in the U.S.S.R. AIP. However, Russian and other IS air traffic controllers have limited access to weather and NOTAM information.

g. **Aeronautical Fixed Telecommunications Network (AFTN) or Society Internationale de Telecommunications Aeronautique (SITA) Networks.** Data transmission and reception in the IS is accomplished using the AFTN or SITA networks, although in remote areas only AFTN may be available. Transmitting or receiving messages using the AFTN system within the IS to and from many remote areas, especially in the SFE, may be less timely than desirable. Most messages enter and depart the IS in Moscow, and the manual manipulation of messages is required at many transfer stations before and after reaching Moscow. For example, an AFTN message from Anchorage, Alaska to Magadan, Russia, will be transmitted via Moscow, and then to several switching stations between there and Magadan. At the switching stations, messages must be hand-carried from the receiving area to the transmitting machine.

h. **Telephone Service.** Telephone service to, from, and within the IS is limited. A variety of systems are used, including an HF troposcatter system which, due to technical limitations, makes communication extremely difficult. Establishing reliable communications to and from line stations within the IS may be more challenging than in other areas.

i. **Navigation.** Navigation on international routes within the IS is permitted using Class I or Class II navigation systems. Route widths vary from 8 km to 20 km, as indicated in the U.S.S.R. AIP. It is the pilot's responsibility to keep the aircraft within established airway boundaries. Available altitudes also vary from one route to another as identified in the U.S.S.R. AIP. When planning flights, operators must ensure that the desired and required altitudes are available for particular routes. This is especially important in the SFE, where there is usually only one route available for flights. As an example, from the Anadyr nondirectional beacon (NDB) along A-81 on the eastern coast of Russia to the Troitskoye NDB there is no parallel airway for a distance of over 1600 miles. Deviation from this route due to weather requirements may be impossible to obtain. In the SFE, Class I en route navigation on international routes is primarily accomplished using NDB's; however, numerous compatible VHF omnidirectional radio range (VOR) transmitters will be installed in the coming years. In western Russia, compatible VOR transmitters are also used to define international routes. In certain situations, especially in the SFE, it may be necessary to require operators to use Class II navigation receivers to supplement Class I navigation receivers due to the distance between navigational aids (navaids) and the limited width of airways. Class II en route navigation on international routes should be relatively simple, provided two conditions are properly addressed. The first condition is that, depending on the published route widths, length of flight, and type of Class II navigation equipment used, it may not be possible for an operator to maintain the course centerline accuracy required by the IS. Limitations

on the operation of some very low frequency (VLF)/Omega systems, as shown in the Flight Manual Supplement, may preclude their use in some areas of the IS. The second condition concerns the lack of VOR/distant measuring equipment (DME) transmitters, especially in the SFE, which means that special consideration must be given by operators to navigation accuracy requirements when using inertial reference systems (IRS) such as B-757, B-767, and A310. Again, it may not be possible to obtain the required navigation accuracy unless, considering the specific route and length of flight, VOR/DME updates are provided to the IRS.

**j. Alternate Airports.** For flight planning purposes, especially in the SFE, operators must give careful consideration to the location of, and routing to, suitable alternate airports. Fuel planning must be carefully considered due to potential difficulties with communications, diversion airport routings, and the lack of suitable airports in the SFE. It is not uncommon for the closest alternate airport to be over 500 nautical miles (NM) from a given destination.

**k. Extended-Range Operations with Two-Engine Airplanes (ETOPS).** Operations in the SFE with two engine aircraft may require ETOPS approval due to the lack of adequate/suitable airports within 60 minutes of the operator's route. AC 120-42, "Extended Range Operations with Two-Engine Airplanes," as amended, provides additional information.

**l. IS Local Navigator Assistance.** Navigation within the IS is the responsibility of the pilot-in-command (PIC). Flights operating off of established international routes, or on the domestic route system, usually are not permitted unless a local navigator is aboard. In unique situations, a radio operator will also be required; however, these two functions are usually performed by the navigator. The assistance of a navigator is also required for flights to or from any IS domestic airport. Although navigators may be required by the IS, they are not required flight crewmembers under the Federal Aviation Regulations (FAR) and are not responsible for the conduct of the flight. The navigator's purpose is to assist in cross-checking course information en route and to assist in cross-checking information on terminal arrivals, departures, and IAP's. FAA approval is required for U.S. operators to carry IS navigators/radio operators. The following information should also be considered when evaluating IS navigator/radio operator requirements:

(1) Due to the lack of informational and technical data pertaining to operations in the IS domestic systems which are needed to meet requirements of FAR Parts 121 and 135, it may not be possible for operators to conduct operations at most IS domestic airports.

(2) IS navigators are required to use a cockpit jumpseat, which may preclude an FAA inspector from accomplishing a required en route inspection or a validation test on a particular flight or series of flights.

(3) The charts for the IS domestic system are usually not available in English.

(4) The Russian MCA charges a substantial fee for the use of navigators and it is expected that other states will do the same when they have established their own Ministry of Civil Aviation.

**m. Area of Magnetic Unreliability.** Depending on the latitude of the routes flown, operations may be conducted within the IS area of magnetic unreliability.

**n. Aeronautical Weather Data and NOTAM's.** Aeronautical weather data and NOTAM's should be available in standard ICAO format through normal channels for all international airports within the IS. This data is normally not available for any airport within the domestic system. Within the IS, weather data and NOTAM's for airports within and outside the area is normally available from the weather service office at international airports. Extremely limited data is available at domestic airports within the IS and usually requires translation into English.

**o. Terminal IAP's.** Terminal IAP's at international airports within the IS are conventional and should not be confusing to foreign operators. Arrival and departure procedures are similar to U.S. standard terminal arrival routes (STAR) and standard instrument departures (SID). Radar vectoring is uncommon, so flight

If an embassy is not available, the Russian Embassy can supply information regarding the procedures to be used.

MCA - Russia  
Telegraphic Address:  
International Department  
Ministry of Civil Aviation  
Leningradsky Prospect 37  
Moscow  
Telex: 411182 AFL SU

It is recommended that a simultaneous request be made to the Central Department of Operational Services (CDOS).

Telegraphic Address:  
Central Department of Operational Services  
Telex: 412303 CDS SU  
ATTN: UUUUYAYW  
SITA: MOWZGSU

Operator requests to use nonstandard routings and/or land at airports normally serving domestic traffic should be submitted through the Economic Section of the U.S. Embassy in Moscow, APO, NY, 09862 (Telegraphic address: Amembassy Moscow, Telex: 413160 USGSO SU). Information to be included in the telex is listed in the AIP and IFIM. Recent operator experience indicates that the communication infrastructure may preclude receiving this authority in a timely manner. Personal presentations, including objectives and justification, may be more effective.

*r. Validation Flight Requirements.* Validation flights are required for all U.S. operators seeking approval to operate within IS airspace. Validation flights are also required for any operator seeking a significant expansion in service or operating area within the IS. Some examples of situations requiring validation flights include the following:

- An air carrier previously serving in the western IS that desires to operate east of the Ural mountains
- An air carrier approved to serve a coastal airport only that desires to expand service to inland airports
- An air carrier that has not operated within the IS within the past 6 months
- Any proposed operation that requires the use of an IS navigator
- Any other situation that the FAA determines is necessary to ensure a safe operation

Validation flights may be conducted with revenue passengers or cargo aboard, unless special situations dictate otherwise. The following items will be considered during validation flights:

- Flight approval
- Adequacy of FAR 121.445 special airport qualification procedures
- Flight planning and flight release/dispatch procedures, when applicable
- Contingency planning - alternate airports for takeoff, en route, and destination
- Communication and navigation procedures
- IAP's
- Data communications with IS (telex, ATTN, SITA)
- Weather and NOTAM availability within the IS

- Fueling and cargo loading procedures

In view of the problems described in the preceding areas of consideration, it may be beyond the capabilities of many operators to conduct operations to most IS domestic airports at this time.

### **3. OPERATIONS TO THE FORMER REPUBLIC OF YUGOSLAVIA.**

Under the provisions of United Nations Security Council (UNSC) Resolution 757 (1992), U.N. member states are required to prohibit takeoffs, landings, and overflight of their territories by aircraft flying to or from the Federal Republic of Yugoslavia, including Slovenia, Croatia, Bosnia-Herzegovina, Macedonia, Serbia (including the provinces of Vojvodina and Kosovo), and Montenegro. Flights which operate into the Federal Republic of Yugoslavia under this operating limitations policy must conform with SFAR No. 66. The PIC must receive an intelligence briefing from the Air Mobility Command (AMC) for each flight to any of the airports located in that geographic area.

Air carriers should observe the following precautions:

- (1) Current intelligence information must be obtained from AMC regarding the best arrival and departure routes and the minimum safe altitude (safe from hostile acts) to maintain at various points along the route.
- (2) Obtain current intelligence information from AMC regarding safe diversion airports and routes.
- (3) If AMC determines that navaid interference and ATC voice communication intrusions can be expected, the air carrier must develop countermeasure procedures and train flightcrews in their use.
- (4) If the authority controlling operations into a particular airport has procedures for communicating emergency diversion information over air/ground communication systems, the air carrier must obtain call signs and frequencies for dissemination to flightcrews.

When planning a flight to the hostile area, the flightcrew should check current NOTAM's for the most current information. Flightcrews should also observe the following precautions.

- (1) Before each flight into a hostile area airport, the flightcrew must obtain a current intelligence briefing from AMC regarding the best routes and minimum altitudes to avoid known and possible threats.
- (2) The briefing must be given at the airport where the flight departs for the hostile area airport, and shall be given when the flightcrew reports for duty to prepare for the final leg of the flight.
- (3) Before the flight is authorized to depart, the flightcrew must ensure that the briefer provides at least the following information:
  - (a) The flightcrew must be informed of known or suspected threats located relatively close to the arrival and departure routes, available diversion routes, and the destination airport.
  - (b) If known or suspected threats are located relatively close to arrival, departure, or diversion routes, or to the airport, the pilot must be advised whether or not it would be prudent to revise the planned routes and/or altitude.
  - (c) Any reports of intentional navaid interference or ATC voice intrusions should be communicated to the flightcrew before departure.

- (d) The flightcrew must receive updated information on emergency diversion procedures and call signs and frequencies of air/ground communication stations that issue emergency diversion advisories.

U.S. air carriers who have contracted with AMC to conduct operations into the former Yugoslavia must ensure that their operators comply with the preceding information. U.S. air carriers who do not have contracts with AMC to conduct such operations must ensure that the operations conform to SFAR No. 66. Air carrier operations must be conducted in accordance with all pertinent sections of FAR Part 121 and the air carrier's

operations specifications at all times. U.S. air carriers who have contracted with AMC to conduct operations to any airport located in the former Republic of Yugoslavia shall amend paragraph C67 of the operations specifications by listing the airports to which such operations are authorized. Also, paragraph C67 must be amended to include a limitation prohibiting operations to such airports unless the requirements of this section have been met.